

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Jawed Astar and Jean R. Pierre

Serial No.: 09/714,469

Art Unit: 1714

Filed: November 16, 2000

Examiner: T. H. Yoon

For: POLYMER BLENDS CONTAINING POLYHYDROXYALKANOATES AND
COMPOSITIONS WITH GOOD RETENTION OF ELONGATIONCommissioner of Patents and Trademarks
Washington, D.C. 20231#6/8m
05.11.02
OFFICE
RECEIVED
APR 30 2002
GROUP 1700POWER OF ATTORNEY BY ASSIGNEE OF ENTIRE INTEREST
AND REVOCATION OF PRIOR POWERS

Sir:

As owner of the entire interest in the above-identified patent application, as evidenced by the attached Statement Under 37 C.F.R. § 3.73(b), all powers of attorney previously given are hereby revoked and the following attorneys and agents are hereby appointed to prosecute and transact all business in the Patent and Trademark Office connected therewith:

Patrea L. Pahst
Zhaoyang Li
Rivka D. Monheit
Jerome R. SmithRegistration No. 31,284
Registration No. 46,872
Registration No. 48,731
Registration No. 35,684081 59 DE
772632.00159

U.S.S.N. 09/714,469

Filed: November 16, 2000

Power of Attorney by Assignee of Interest and Revocation of Prior Powers

Please send all correspondence relating to the above-identified patent application to:

Patricia L. Pabst
HOLLAND & KNIGHT LLP
Suite 2000, One Atlantic Center
1201 West Peachtree Street, N.E.
Atlanta, Georgia 30309-3400

(404) 817-8473 (Telephone)
(404) 817-8588 (Fax)

The undersigned signatory (whose title is supplied below) is empowered to act on behalf of the assignee identified below, and has reviewed all the documents in the chain of title of the above-identified patent application and, to the best of the undersigned's knowledge and belief, title is in the assignee.

Metabolix, Inc.

By: Oliver P. PeoplesPrinted Name: OLIVER P. PEOPLESTitle: VP R & DDate: APRIL 30, 2002

ATL1 8522209 v1

- 031 189 01 -
077812 00155

PTO/SB/06 (08-00)

Approved for use through 10/31/2002. OMB 0851-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Jawed Asrar and Jean R. PierreApplication No./Patent No.: 09/714,469 Filed/Issue Date: November 16, 2000Entitled: Polymer blends containing polyhydroxyalkeneates and composites with good retention of elongationMetabolix, Inc.

(Name of Assignee)

a Corporation

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.
The extent (by percentage) of its ownership interest is _____ %

In the patent application/patent identified above by virtue of either:

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

OR

- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: Jawed Asrar and Jean R. Pierre To: Monsanto Company
The document was recorded in the United States Patent and Trademark Office at
Reel 9778, Frame 0197, or for which a copy thereof is attached.

2. From: Monsanto Company To: Metabolix Inc.
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

4/30/02
Date

Dr. Oliver P. Peoples

Typed or printed name

Oliver P. Peoples

Signature

Cofounder and VP R&D

Title

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual user. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

PATENT ASSIGNMENT

THIS PATENT ASSIGNMENT ("Assignment") is made and entered into as of this 14th day of May, 2001, by and between Metabolix, Inc., a Delaware corporation, having its principal place of business located at 303 Third Street, Cambridge, Massachusetts 02142 (hereinafter "Assignee"), and Monsanto Company, a Delaware corporation, having its principal place of business located at 800 North Lindbergh Boulevard, St. Louis, Missouri 63167 (hereinafter "Assignor").

WHEREAS, except as otherwise indicated, Assignor owns or has owned the patents and patent applications identified on Schedule A and Schedule B, attached hereto, some of which have lapsed or have been abandoned;

WHEREAS, Assignee acknowledges that some of the patents and patent applications listed on Schedule A and Schedule B have been abandoned or have lapsed; and

WHEREAS, Assignor and Assignee are parties to the Transaction Documents (as defined in a certain Asset Purchase Agreement of even date herewith entered into by the parties hereto) which provides for, among other things, the assignment of the identified patents and patent applications from Assignor to Assignee.

NOW, THEREFORE, in consideration of the mutual covenants and obligations contained herein and in the Transaction Documents, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

Assignor does hereby sell, assign, transfer, and set over unto said Assignee all of its right, title, and interest in and to the inventions described and/or claimed in, and the patents and patent applications relating to polyhydroxyalkanoates ("PHAs") identified on Schedule A and Schedule B, and any reissues or reexaminations thereof, and any continuing, continuation, continuation-in-part, divisional, foreign counterpart, and/or Patent Cooperation Treaty applications which may be hereinafter filed, and in and to any Letters Patent which may be granted and issued, in and for the United States of America and all foreign countries, including all treaty and convention rights, and the right to sue for present, past, and future infringement, enforce any rights and file any causes of action related thereto, either in law or equity, and to all income, royalties, fees, damages, and payments now or hereafter due or payable with respect thereto (hereinafter "Patents"). The identified Patents shall be held and enjoyed by said Assignee, its successors and assigns, to the fullest extent permissible under any applicable laws and ends of the terms for which all Letters Patents therefor may be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this Assignment had not been made.

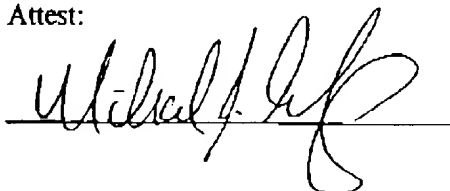
Assignee is hereby authorized to make application for and to receive Letters Patent for said inventions in any countries at its election. And by this covenant the Assignor agrees to execute or procure further necessary assurance of title to said inventions, patents and


perfect the title to said inventions, patents and patent applications in Assignee, its successors, assigns or other legal representatives; and upon the reasonable request of said Assignee, will execute any additional applications for patents for said inventions, or any part or parts thereof, and for the reissue of any Letters Patent to be granted therefor; and will make all rightful oaths and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of said Assignee, its successors, assigns, or other legal representatives.

Notwithstanding the foregoing, Assignee shall prepare, execute and deliver any and all documents related to the recordation or legalization of any rights granted herein. And, as between the parties hereto, Assignee shall be solely obligated and responsible for any and all expenses associated with such recordation or legalization, including without limitation any preparation, execution and delivery expenses, and shall further be obligated and responsible for any expenses incurred in Assignee's efforts to obtain, establish or perfect ownership of right, title or interest in or to the Patents. Assignee agrees that it shall not record this Assignment in or with the United States Patent and Trademark Office or in or with any patent office foreign to the country of the United States of America. The assignment on Schedule C attached hereto serves as an exemplary form of instrument for recording purposes.

MONSANTO COMPANY
800 North Lindbergh Boulevard
St. Louis, Missouri 63167

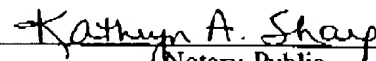
Attest:



By: 
Name: DANA L. WESLEY
Title: DIRECTOR, M & A

STATE OF MISSOURI)
COUNTY OF ST. LOUIS) ss.:

On this 14th day of May, 2001, before me personally came Dana L. Wesley, to me personally known, who being duly sworn did say that he is the Director, M & A of Monsanto Company, that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed on behalf of said corporation by authority of its Board of Directors; and said Dana L. Wesley acknowledged said instrument to be the free act and deed of said corporation.


Notary Public

My commission expires _____



METABOLIX, INC.
303 Third Street
Cambridge, Massachusetts 02142

FAX RECEIVED
APR 30 2002
GROUP 1700

Attest:

By: James J. Barber

Name: JAMES J. BARBER

Title: PRESIDENT

STATE OF MASSACHUSETTS)
) ss.:
COUNTY OF MIDDLESEX)

On this 21st day of May, 2001, before me personally came James J. Barber, to me personally known, who being duly sworn did say that he is the President and CEO of Metabolix, Inc., that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed on behalf of said corporation by authority of its Board of Directors; and said James J. Barber acknowledged said instrument to be the free act and deed of said corporation.

MY COMMISSION EXPIRES
JANUARY 24, 2008

Don T. Scott
Notary Public

My commission expires _____

Signature page to the Patent Assignment dated May 14, 2001

SCHEDULE A to the Patent Assignment**Patents and Patent Applications**

1. Title: **METHODS OF PHA EXTRACTION AND RECOVERY USING NON-HALOGENATED SOLVENTS**

Inventor(s): **Kurdikar, et al.**
 U.S. Patent No.: **6,043,063**
 Issued: **March 28, 2000**
 Serial No.: **09/060,121**
 Filed: **April 15, 1997**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	4/14/98	US9807484	10/22/98	WO9846782	Filed
EP	4/14/98	US9807484	2/2/00	09757588	Pending

2. Title: **DNA SEQUENCE USEFUL FOR THE PRODUCTION OF POLYHYDROXYALKANOATES**

Inventor(s): **Kruger, et al.**
 U.S. Patent No.: **5,750,848**
 Issued: **May 12, 1998**
 Serial No.: **08/700,576**
 Filed: **August 13, 1996**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
US (reissue appln.)	5/12/00	09/570842			Pending
WO	8/13/97	US9714388	2/19/98	WO9806854	Filed
EP	8/13/97	979372737			Pending
JP	8/13/97	51005798	12/19/00	KOHYO200051681	Pending

3. Title: **HIGH TEMPERATURE PHA EXTRACTION USING PHA-POOR SOLVENTS**

Inventor(s): **Kurdikar, et al.**
 U.S. Patent No.: **6,087,471**
 Issued: **July 11, 2000**
 Serial No.: **09/060,120**
 Filed: **April 14, 1998**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
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4. Title: **RHODOSPIRILLUM RUBRUM
POLY- β -HYDROXYALKANOATE SYNTHASE**
 Inventor(s): **Clemente, et al.**
 U.S. Patent No.: **5,849,894**
 Issued: **December 15, 1998**
 Serial No.: **08/756,317**
 Filed: **November 25, 1996**
 Priority: **November 29, 1995**

5. Title: **MACROMOLECULAR DEGRADATION OF NUCLEIC
ACIDS**
 Inventor(s): **Greer**
 U.S. Patent No.: **5,627,276**
 Issued: **May 6, 1997**
 Serial No.: **08/424,458**
 Filed: **October 27, 1993**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	10/27/93	GB9302208	5/11/1994	WO9410289	Filed
EP	10/27/93	939236246	9/6/95	0669970	Filed
AU	10/27/93	6280194	1/31/97	676026	Lapsed
BE	10/27/93	939236246	9/6/95	0669970	Issued
BR	10/27/93	PI93073216			Aband.
CA	10/27/93	2146455	5/11/94		Pending
DE	10/27/93	939236246	9/6/95	0669970	Issued
FI	10/27/93	951997			Pending
FR	10/27/93	939236246	9/6/95	0669970	Issued
GB	10/27/93	92225614			Aband.
GB	10/27/93	939236246	9/6/95	0669970	Issued
IT	10/27/93	939236246	9/6/95	0669970	Issued
JP	10/27/93	51081994	3/19/96	OP50241596	Pending
NO	10/27/93	951595			Aband.

6. Title: **POLYESTER COMPOSITION AND OLIGOMERS USEFUL
AS COMPONENTS THEREOF-POLYMER**
 Inventor(s): **Hammond, et al.**
 U.S. Patent No.: **5,550,173**
 Issued: **August 27, 1996**
 Serial No.: **08/432,116**
 Filed: **November 4, 1993**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	11/4/93	GB9302279	5/26/94	WO9411445	Filed
EP	11/4/93	939247045	8/30/95	0668893	Aband. AU
	11/4/93	6396294	12/18/97	684499	Lapsed
CA	11/4/93	2147982	5/26/94		Pending
FI	11/4/93	952163			Pending
GB	11/6/92	92233501			Aband.
JP	11/4/93	51182794	4/23/96	OP50372396	Pending
NO	11/4/93	19951749			Aband.

7. Title: **PROCESS FOR PREPARING FILMS AND COATINGS**
 Inventor(s): **Waddington**
 U.S. Patent No.: **6,111,006**
 Issued: **August 29, 2000**
 Serial No.: **08/663,088**
 Filed: **July 7, 1997**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	12/19/94	GB9402761	6/29/95	WO9517454	Filed
EP	12/19/94	959038514	12/11/96	0746585	Filed
BE	12/19/94	959038514	12/11/96	0746585	Issued
CA	12/19/94	2179522	6/29/95		Pending
DE	12/19/94	959038514	12/11/96	0746585	Issued
FR	12/19/94	959038514	12/11/96	0746585	Issued
GB	12/20/93	93259521			Aband.
GB	12/19/94	959038514	12/11/96	0746585	Issued
IT	12/19/94	959038514	12/11/96	0746585	Issued
JP	12/19/94	51725695	7/29/97	OP50744197	Pending

8. Title: **3-HYDROXYBUTYRATE POLYMERS**
 Inventor(s): **Collins, et al.**
 U.S. Patent No.: **4,477,654**
 Issued: **October 16, 1984**
 Serial No.: **June 29, 1982**
 Filed: **November 9, 1981**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
EP		813051869	5/26/82	0052459	Filed
BE	10/30/81	813051869	5/26/82	0052459	Issued
CH	10/30/81	813051869	5/26/82	0052459	Lapsed
DE	10/30/81	813051869	5/26/82	0052459	Issued

IT	10/30/81	813051869	5/26/82	0052459	Aband.
JP	11/18/81	18515381	3/2/94	1560494	Issued
JP	11/18/81	27883890	11/10/92	7034292	Issued
JP	11/18/81	33224391	1/26/93	OP1538393	Issued
NL	10/30/81	813051869	05/26/82	0052459	Lapsed
RU	11/17/81	335714505			Lapsed
SE	10/30/81	813051869	05/26/82	0052459	Lapsed
UA	10/28/93				Lapsed

9. Title: **3-HYDROXYBUTYRATE POLYMER COMPOSITION**
 Inventor(s): **Herring, et al.**
 U.S. Patent No.: **5,061,743**
 Issued: **October 29, 1991**
 Serial No.: **07/530,560**
 Filed: **May 30, 1990**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
EP		903055028	12/5/90	0400855	Filed
AT	5/21/90	903055028	12/5/90	0400855	Lapsed
BE	5/21/90	903055028	12/5/90	0400855	Issued
BR	5/30/90	PI9002561			Aband.
CA	5/30/90	2017885	11/30/90		Issued
CH	5/21/90	903055028	12/5/90	0400855	Lapsed
DE	5/21/90	903055028	12/5/90	0400855	Issued
DK	5/21/90	903055028	12/5/90	0400855	Lapsed
ES	5/21/90	903055028	12/5/90	0400855	Lapsed
FR	5/21/90	903055028	12/5/90	0400855	Issued
GB	5/30/89	89123889			Aband.
GB	5/21/90	903055028	12/5/90	0400855	Issued
GR	5/21/90	903055028	12/5/90	0400855	Lapsed
IN	5/25/90	507DEL90		177061	Lapsed
IT	5/21/90	903055028	12/5/90	0400855	Issued
JP	5/30/90	14124790	2/19/99	2888924	Issued
KR	5/30/90	781490			Lapsed
LU	5/21/90	903055028	12/5/90	0400855	Lapsed
MW	5/30/89	4690			Lapsed
NL	5/21/90	903055028	12/5/90	0400855	Lapsed
SE	5/21/90	903055028	12/5/90	040855	Lapsed
SZ	6/3/91	RP281991			Lapsed
TW	5/31/90	79104435	4/1/91		Lapsed
ZA	5/28/90	904073			Lapsed
ZW	5/28/90	8390			Lapsed

10. Title: **COPOLYMER PRODUCTION**
 Inventor(s): **Byrom**
 U.S. Patent No.: **5,364,778**
 Issued: **November 15, 1994**
 Serial No.: **08/103,155**
 Filed: **December 10, 1990**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
EP		903131332	6/12/91	0431833	Filed
AU	12/7/90	6782790	6/3/93	637657	Issued
BE	12/4/90	903131332	6/12/91	0431833	Issued
BR	12/7/90	PI90062310	8/18/98		Issued
CA	12/10/90	2031888	6/9/91		Issued
DE	12/4/90	903131332	6/12/91	0431833	Issued
FR	12/4/90	903131332	6/12/91	0431833	Issued
GB	12/8/89	89277941			Aband.
GB	12/4/90	903131332	6/12/91	0431833	Issued
IN	12/6/90	1235DEL90		177461	Aband.
JP	12/7/90	40094790	2/25/00	3036851	Issued
KR	12/8/90	2017590	7/9/99	223341	Issued
NZ	12/7/90	236394	8/23/93	236394	Issued
TW	12/12/90	79110458	1/12/93	NI58448	Issued
ZA	12/6/90	909816	11/27/91	909816	Issued

11. Title: **BIODEGRADABLE POLYESTER PLASTICIZER**
 Inventor(s): **Montador, et al.**
 U.S. Patent No.: **5,516,825**
 Issued: **May 14, 1996**
 Serial No.: **08/381,903**
 Filed: **August 10, 1993**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	8/10/93	GB9301689	3/3/94	WO9404607	Filed
EP		949080568	5/31/95	0655077	Filed
AT	8/10/93	949080568	5/31/95	0655077	Issued
AU	8/10/93	4723893	3/6/97	676191	Issued
BE	8/10/93	94908568	5/31/95	0655077	Issued
CA	8/10/93	2142333	3/3/94		Pending
CH	8/10/93	94908568	5/31/95	0655077	Issued
DE	8/10/93	94908568	5/31/95	0655077	Issued
DK	8/10/93	94908568	5/31/95	0655077	Issued
ES	8/10/93	94908568	5/31/95	0655077	Issued

GB	8/13/92	92171313			Aband.
GB	8/10/93	94908568	5/31/95	0655077	Issued
IT	8/10/93	94908568	5/31/95	0655077	Issued
JP	8/10/93	50599494	3/5/96	OP50208596	Pending
NL	8/10/93	94908568	5/31/95	0655077	Issued
NO	8/10/93	19950522	1/3/00	306864	Issued
SE	8/10/93	94908568	5/31/95	065507	Issued

12. Title: **POLYMER COMPOSITION COMPRISING A CRYSTALLIZABLE POLYMER STABILIZED IN AN AMORPHOUS OR INCOMPLETE STATE**

Inventor(s): **Clauss, et al**
 U.S. Patent No. **5,599,891**
 Issued: **February 4, 1997**
 Serial No.: **08/407,030**
 Filed: **September 28, 1993**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	9/28/93	GB9302014	4/14/94	WO9407940	Filed
EP	9/28/93	939210100	7/12/95	0662097	Allowed
AU	9/28/93	4829693	2/13/97	675664	Lapsed
BR	9/28/93	PI93071302			Aband.
CA	9/28/93	2144449	4/14/94		Pending
FI	9/28/93	951452			Pending
GB	9/28/92	92204478			Pending
GB	9/28/92	92204015			Pending
GB	9/28/92	93046514			Pending
JP	9/28/93	50882694	3/5/96	OP50208896	Pending
KR	9/28/93	70059511999			Aband.
NO	9/28/93	19951158			Aband.

13. Title: **PROCESS FOR SEPARATION OF SOLID MATERIALS FROM MICROORGANISMS**

Inventor(s): **Cumming, et al**
 U.S. Patent No.: **5,622,847**
 Issued: **April 22, 1997**
 Serial No.: **08/433,501**
 Filed: **November 12, 1993**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	11/12/93	GB9302329	5/26/94	WO9411491	Filed
EP		939247524	9/13/95	0670891	Filed

BE	11/12/93	939247524	9/13/95	0670891	Issued
BR	11/12/93	P193074280			Aband.
CA	11/12/93	2147985	5/26/94	0670891	Aband.
DE	11/12/93	939247524	9/13/95	0670891	Issued
DK	11/12/93	939247524	9/13/95	0670891	Lapsed
ES	11/12/93	939247524	9/13/95	0670891	Lapsed
FI	11/12/93	952292			Pending
FR	11/12/93	939247524	9/13/95	0670891	Issued
GB	11/12/92	92237098			Aband.
GB	11/12/92	939247524	9/13/95	0670891	Issued
IT	11/12/92	939247524	9/13/95	0670891	Issued
JP	11/12/92	51186094	4/9/96	OP50313196	Pending
KR	11/12/92	7018941995			Aband.
LU	11/12/92	939247524	9/13/95	0670891	Lapsed
NL	11/12/92	939247524	9/13/95	0670891	Lapsed
NO	11/12/92	951867			Aband.
PT	11/12/92	939247524	9/13/95	0670891	Lapsed

14. Title: **POLYHYDROXYALKANOATES AND FILM FORMATION THEREFROM**

Inventor(s): **Waddington**
 U.S. Patent No.: **5,534,616**
 Issued: **July 19, 1996**
 Serial No.: **08/491,929**
 Filed: **January 12, 1994**

14a. Title: **POLYHYDROXYALKANOATES AND FILM FORMATION THEREFROM**

Inventor(s): **Waddington**
 U.S. Patent No.: **5,578,382**
 Issued: **November 26, 1996**
 Serial No.: **08/595,213**
 Filed: **February 1, 1996**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	1/12/94	GB9400056	7/21/94	WO9416000	Filed
EP	1/12/94	949042410	2/7/96	0695321	Filed
AU	1/12/94	5837694	9/11/97	681862	Lapsed
BE	1/12/94	949042410	2/7/96	0695321	Opp.
CA	1/12/94	2153807			Pending
DE	1/12/94	949042410	2/7/96	0695321	Opp.
FI	1/12/94	953411			Pending
FR	1/12/94	949042410	2/7/96	0695321	Opp.

IT	1/12/94	949042410	2/7/96	0695321	Opp.
JP	1/12/94	51583394	6/11/96	OP50541596	Pending

15. Title: **ADHESION PROCESS USING PHA**
 Inventor(s): **Kemmish**
 U.S. Patent No.: **5,711,842**
 Issued: **January 27, 1998**
 Serial No.: **08/591,558**
 Filed: **July 11, 1994**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	7/11/94	GB9401496	1/26/95	WO9502649	Filed
EP	7/11/94	949205397	5/1/96	0708804	Filed
AU	7/11/94	7129294	1/15/98	685135	Lapsed
BE	7/11/94	949205397	5/1/96	0708804	Issued
CA	7/11/94	2166613	1/26/95	OPNONE	Pending
DK	7/11/94	949205397	5/1/96	0708804	Issued
FI	7/11/94	960158			Pending
GB	7/11/94	949205397	5/1/96	0708804	Issued
IT	7/11/94	949205397	5/1/96	0708804	Issued
JP	7/11/94	50439695	1/7/97	OP50015797	Pending
NO	7/11/94	19960153			Aband.

16. Title: **POLYESTER COMPOSITION**
 Inventor(s): **Hammond, et al**
 U.S. Patent No.: **5,753,782**
 Issued: **May 19, 1998**
 Serial No.: **08/553,649**
 Filed: **June 1, 1994**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	6/1/94	GB9401184	12/8/94	WO9428061	Filed
EP	6/1/94	949170773	3/20/96	0701586	Und. App.
CA	6/1/94	2163444	12/8/94		Pending
GB	6/2/93	93113991			Aband.
JP	6/1/94	50042195	2/10/97	OP50145097	Pending

17. Title: **SEPARATION PROCESS**
 Inventor(s): **Holmes, et al**
 U.S. Patent No.: **4,910,145**
 Issued: **March 20, 1990**
 Serial No.: **07/374,567**
 Filed: **November 5, 1988**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
EP		843075425	6/19/85	0145233	Filed
BE	11/1/84	843075425	6/19/85	0145233	Issued
CA	12/20/85	498397			Issued
CH	11/1/84	843075425	6/19/85	0145233	Issued
DE	11/1/84	843075425	6/19/85	0145233	Issued
GB	11/1/84	843075425	6/19/85	0145233	Issued
IT	11/1/84	843075425	6/19/85	0145233	Issued
JP	11/21/84	24697584	10/1/92	6163892	Issued
NL	11/1/84	843075425	6/19/85	0145233	Issued
SE	11/1/84	843075425	6/19/85	0145233	Issued

18. Title: **POLYMER PRODUCTION/POLYESTERS HAVING C8 AND/OR C10 MONOMER REPEAT UNITS**

Inventor(s): **Anderson, et al.**
 U.S. Patent No.: **5,296,362**
 Issued: **March 22, 1994**
 Serial No.: **07/507,842**
 Filed: **February 17, 1998**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
EP		903031193	10/17/90	0392687	Filed
AU	1/31/99	5240590	2/18/93	634218	Lapsed
BR	1/31/99	PI90017323			Aband.
CA	8/2/96	2014238			Aband.
CH	1/31/99	903031193	10/17/90	0392687	Lapsed
DE	2/17/98	903031193	10/17/90	0392687	Issued
FR	2/17/98	903031193	10/17/90	0392687	Issued
GB	2/17/98	903031193	10/17/90	0392687	Issued
IN	12/19/94	319DEL90			Aband.
JP	1/14/00	9747490	12/11/90	OP29959090	Aband.
KR	2/27/95	49461990			Aband.
MW	3/4/93	MW2390			Aband.
NL	1/31/99	903031193	10/17/90	0392687	Lapsed
NZ	1/31/99	233296	10/11/92	233296	Lapsed
SZ	3/4/93	RP461991			Lapsed
TW	1/31/99	79102871	3/21/91		Lapsed
ZA	1/31/99	902399			Lapsed
ZW	11/23/93	4890			Lapsed

SL01DKA.S7128102.02

19. Title: **HV/HB COPOLYMER PRODUCTION**
 Inventor(s): **Cox, et al**
 U.S. Patent No.: **6,080,562**
 Issued: **June 27, 2000**
 Serial No.: **07/949,524**
 Filed: **May 24, 1991**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
EP				0535012	Filed
AT	5/24/91	919102236	4/7/93	0535012	Lapsed
AU	5/24/91	7970891	9/15/94	652942	Lapsed
CA	5/24/91	2083695	11/26/91		Pending
DE	5/24/91	919102236	4/7/93	0535012	Issued
GB	5/25/90	919102236			Aband.
GB	5/24/91	90117771	4/7/93	0535012	Issued
IT	5/24/91	919102236	4/7/93	0535012	Issued
JP	5/24/91	50952491			Pending
KR	5/24/91	70296892			Aband.

20. Title: **PROCESS FOR THE RECOVERY OF
POLYHYDROXYALKANOIC ACID**
 Inventor(s): **Liddell**
 U.S. Patent No.: **5,894,062**
 Issued: **April 13, 1999**
 Serial No.: **08/793,832**
 Filed: **August 15, 1995**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	8/15/95	GB9501926	2/29/96	WO9606179	Filed
EP	8/15/95	959278979	6/4/97	0776372	Filed
BE	8/15/95	959278979	6/4/97	0776372	Issued
CA	8/15/95	2197783			Pending
DE	8/15/95	959278979	6/4/97	0776372	Issued
FI	8/15/95	970680			Pending
FR	8/15/95	959278979	6/4/97	0776372	Issued
GB	8/18/94	94166907			Aband.
GB	8/15/95	959278979	6/4/97	0776372	Issued
IT	8/15/95	959278979	6/4/97	0776372	Issued
JP	8/15/95	50785096	5/6/98	KOHYO50446098	Pending
KR	8/15/95				Aband.
MX	8/15/95				Aband.
NO	8/15/95	19970739			Aband.

21. Title: **PRODUCTION OF POLYMER COMPOSITION**
 Inventor(s): **George, et al.**
 U.S. Patent No.: **5,891,936**
 Issued: **April 6, 1999**
 Serial No.: **08/894,346**
 Filed: **February 12, 1996**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	2/12/96	GB9600305	8/22/96	WO9625452	Filed
EP	2/12/96	969023456	12/3/97	0809669	Filed
BE	2/12/96	969023456		0809669	Issued
DE	2/12/96	969023456	12/3/97	0809669	Issued
FI	2/12/96	973364			Pending
FR	2/12/96	969023456	12/3/97	0809669	Issued
GB	2/16/95	95029807			
GB	12/21/95	95262812			
GB	2/12/96	969023456	12/3/97	0809669	Issued
IT	2/12/96	969023456	12/3/97	0809669	Issued
JP	2/12/96	52474596	1/12/99	KOHYO50047699	Pending

22. Title: **LATEX OF POLYHYDROXYALKANOATE**
 Inventor(s): **George, et al.**
 U.S. Patent No.: **5,977,250**
 Issued: **November 2, 1999**
 Serial No.: **08/875,976**
 Filed: **February 9, 1996**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	2/9/96	GB9600284	8/15/96	WO9624682	Filed
EP	2/9/96	969019264	11/26/97	0808373	Filed
BE	2/9/96	969019264	11/26/97	0808373	Opp.
DE	2/9/96	969019264	11/26/97	0808373	Opp.
FI	2/9/96	973297			Pending
FR	2/9/96	969019264	11/26/97	0808373	Opp.
GB	2/9/95	95025219			Aband.
GB	2/9/96	969019264	11/26/97	0808373	Opp.
IT	2/9/96	969019264	11/26/97	0808373	Opp.
JP	2/9/96	52408896	1/19/99	KOHYO50061399	Pending

23. Title: **A METHOD FOR PREPARING A COMPOSTIBLE LAMINATE WITH POLYCAPROLACTONE AND A POLY 3-HYDROXYALKANOIC ACID**
 Inventor(s): **Karbuketo, et al.**
 Serial No.: **08/930,212**
 Filed: **February 2, 1998**
Under Appeal

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	4/4/96	GB9600819	10/10/96	WO9631347	Filed
EP	4/4/96	969082908	1/21/98	0819058	Pending
CA	4/4/96	2217640			Pending
GB	4/7/95	95072633			Aband.
JP	4/4/96	53009596			Pending

24. Title: **DISPERSIONS OF POLYHYDROXYALKANOATES IN WATER**
 Inventor(s): **George**
 Serial No.: **09/077,953**
 Filed: **June 19, 2000**
Abandoned

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	12/12/96	US9619886	6/19/97	WO9721762	Filed
EP	12/12/96	969448075			Pending
CA	12/12/96	2239980			Pending
GB	12/12/95	95253902			Aband.
JP	12/12/96	52223197	2/29/00	2000502375	Pending
MX	12/12/96	984764			Aband.

25. Title: **INCREASING THE PARTICLE SIZE OF POLYMERS**
 Inventor(s): **George, et al.**
 U.S. Patent No.: **5,798,440**
 Issued: **August 25, 1998**
 Serial No.: **08/374,662**
 Filed: **July 13, 1993**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	7/13/93	GB9301465	2/3/94	WO9402622	Filed
EP		939160594	5/17/95	0652969	Filed
AT	7/13/93	939160594	5/17/95	0652969	Lapsed

BR	7/13/93	PI93067569	12/8/98		Aband.
CA	7/13/93	2137794	2/3/94		Aband.
CH	7/13/93	939160594	5/17/95	0652969	Lapsed
DE	7/13/93	939160594	5/17/95	0652969	Issued
DK	7/13/93	939160594	5/17/95	0652969	Lapsed
ES	7/13/93	939160594	5/17/95	0652969	Lapsed
FI	7/13/93	950284			Pending
FR	7/13/93	939160594	5/17/95	0652969	Issued
GB	7/24/92	92157916			Aband.
GB	7/13/93	939160594	5/17/95	0652969	Issued
IE	7/13/93	939160594	5/17/95	0652969	Lapsed
IT	7/13/93	939160594	5/17/95	0652969	Issued
JP	7/13/93	50424794	10/12/95	OP50913195	Pending
KR	7/13/93	70475494			Aband.
NL	7/13/93	939160594	5/17/95	0652969	Lapsed
NO	7/13/93	19950241			Aband.
NZ	7/13/93	254186	11/26/96	254186	Lapsed
RU	7/13/93	95104935			Aband.
SE	7/13/93	939160594	5/17/95	0652969	Lapsed
ZA	7/16/93	935179	6/29/94	935179	Lapsed

26. Title: **MULTILAYER BIODEGRADABLE FILM**
 Inventor(s): **Kemmish, et al.**
 Serial No.: **08/647,909**
 Filed: **May 30, 1996**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	11/29/94	GB9402609	6/8/95	WO9515260	Filed
EP	11/29/94	959021874	9/18/96	0731754	Filed
BE	11/29/94	959021874	9/18/96	0731754	Issued
CA	11/29/94	2177065			Pending
DE	11/29/94	959021874	9/18/96	0731754	Issued
FI	11/29/94	962251			Pending
FR	11/29/94	959021874	9/18/96	0731754	Issued
GB	11/30/93	93245124			Aband.
GB	11/29/94	959021874	9/18/96	0731754	Issued
IT	11/29/94	959021874	9/18/96	0731754	Issued
JP	11/29/94	51547295	6/24/97	OP50630397	Pending

27. Title: **COPOLYESTERS AND PROCESS FOR THEIR PRODUCTION**
 Inventor(s): **Collins, et al.**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
EP	6/21/82	823032149	1/12/83	0069497	Filed
AU	5/24/82	8410882	4/16/87	560653	Issued
BE	6/21/82	823032149	1/12/83	0069497	Issued
CA	7/5/83	431821	7/30/87	1223687	Issued
CH	6/21/82	823032149	1/12/83	0069497	Issued
DE	6/21/82	823032149	1/12/83	0069497	Issued
FR	6/21/82	823032149	1/12/83	0069497	Issued
GB	6/21/82	823032149	1/12/83	0069497	Issued
IT	6/21/82	823032149	1/12/83	0069497	Issued
JP	7/7/82	11831682	6/25/92	3876392	Issued
JP	7/7/82	21877193	5/24/95	4762395	Issued
NL	6/21/82	823032149	1/12/83	0069497	Issued
NZ	6/23/82	201054	6/19/86	201054	Issued
NZ	6/23/82	213039		213039	Issued
SE	6/21/82	823032149	1/12/83	0069497	Issued

28. Title: **POLYHYDROXYALKANOATES OF NARROW MOLECULAR WEIGHT DISTRIBUTION PREPARED IN TRANSGENIC PLANTS**
- Inventor(s): **Asrar, et al.**
U.S. Patent No.: 6,091,002
Issued: August 15, 2000
Serial No.: 08/912,205
Filed: August 15, 1997
- US Divisional Filed: 11/15/99 Serial No.: 09/440400 Status: Allowed
US Divisional Filed: 11/30/99 Serial No.: Not known Status: Pending
29. Title: **METHODS FOR THE BIOSYNTHESIS OF POLYESTERS**
- Inventor(s): **Gottschalk, et al.**
Serial No.: 09/380,773
Filed: September 3, 1999

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	3/3/97	US9703994	9/11/98	WO9839453	Filed
EP	3/3/97	979159415	10/13/99	0958367	Pending

30. Title: **PHA COMPOSITIONS AND METHODS FOR THEIR USE
IN THE PRODUCTION OF PHA FILMS**

Inventor(s): **Asrar, et al.**

Serial No.: **09/122,147**

Filed: **July 24, 1998**

CPA filed recently under Section 1.53(d)

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	7/24/98	US9815398	2/4/99	WO9905207	Filed
EP	7/24/98	989370895	5/3/00	0996670	Pending

31. Title: **MODIFIED POLYHYDROXYALKANOATES FOR
PRODUCTION OF COATINGS AND FILMS**

Inventor(s): **Asrar, et al.**

U.S. Patent Nos.: **6,096,810; 6,201,083**

Issued: **August 1, 2000; March 13, 2001**

Serial Nos.: **09/156,147; 09/609,878**

Filed: **September 18, 1998; July 5, 2000**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	9/18/98	US9819461	3/25/99	WO9914268	Filed
EP	9/18/98	989471123	8/2/00	1023378	Allowed

32. Title: **PLASTICIZED POLYHYDROXYALKANOATE
COMPOSITIONS AND METHODS FOR THEIR USE IN
THE PRODUCTION OF SHAPED POLYMERIC ARTICLES**

Inventor(s): **Asrar, et al.**

U.S. Patent No.: **6,127,512**

Issued: **October 3, 2000**

Serial No.: **09/179,271**

Filed: **October 31, 1997**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	10/27/98	US9822753	5/14/99	WO9923146	Filed
EP	10/27/98	989562459	8/9/00	1025152	Pending

33. Title: **POLYMER BLENDS CONTAINING
POLYHYDROXYALKANOATES AND COMPOSITIONS
WITH GOOD RETENTION OF ELONGATION**

Inventor(s): **Asrar, et al.**
U.S. Patent No.: **6,191,203**
Issued: **February 20, 2001**
Serial No.: **09/714,469; 09/179,780 (Divisional: Pending)**
Filed: **November 16, 2000; October 31, 1997**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	10/27/98	US9822723	5/14/99	WO9923161	Filed
EP	10/27/98	US9822723			Pending

34. Title: **BIOSYNTHESIS OF MEDIUM CHAIN LENGTH
POLYHYDROXYALKANOATES**

Inventor(s): **Poirier, et al.**
Serial No.: **09/582,534**
Filed: **June 27, 2000**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	1/5/98	US9800083	7/15/99	WO9935278	Filed
EP	1/5/98	US9800083			Pending

35. Title: **PHAE AND PHAC COMPONENTS OF POLY(HYDROXY
FATTY ACID) SYNTHASE FROM THIOCAPASA**

Inventor(s): **Liebergesell, et al.**
U.S. Patent No.: **6,011,144**
Issued: **January 4, 2000**
Serial No.: **08/809,286**
Filed: **September 15, 1995**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
US	10/18/99	09/420119			
US (Divisional)	02/01/01 (unconfirmed)				
WO	9/15/95	DE9501279	3/21/96	WO9608566	Filed
EP	9/15/95	959311499			Pending
CA	9/15/95	2203264			Pending
DE	9/16/94	P44331347			Pending

36. Title: **HYDROXY-TERMINATED
POLYHYDROXYALKANOATES**

Inventor(s): **Asrar, et al.**
 U.S. Patent No.: **5,994,478**
 Issued: **November 30, 1999**
 Serial No.: **09/063,256**
 Filed: **April 20, 1998**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
US (Divisional)	10/1/99	09/410708	3/20/01	6204341	Issued
US (Divisional)	4/20/98	(Not known)			
US (Divisional)	8/17/00	09/640641			Allowed
WO	4/20/98	US9807967	10/29/98	WO9848028	Filed
WO	6/14/99	US9913321	12/16/99	WO9964617	Filed
EP	4/20/98	989184924	2/9/00	0977882	Pending
EP	6/14/99	US9913321			Pending
EP (C-I-P)	6/14/99	99275100	4/4/01	1088093	Pending

36a. Title: **HYDROXY-TERMINATED
POLYHYDROXYALKANOATES**

Inventor(s): **Asrar, et al.**
 U.S. Patent No.: **6,156,852**
 Issued: **December 5, 2000**
 Serial No.: **09/096,797**
 Filed: **April 29, 1997**

37. Title: **PRODUCTION OF POLYHYDROXYALKANOATE IN
PLANTS**

Inventor(s): **Bright, et al.**
 U.S. Patent No.: **5,502,273; 6,175,061**
 Issued: **March 26, 1996; January 16, 2001**
 Serial No.: **08/536,123; 08/536123**
 Filed: **September 28, 1994; September 29, 1995**
 CPA Filed: **April 20, 2000**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	4/23/92	GB9200742	11/12/92	WO9219747	Filed
EP	4/23/92	929089209	4/6/94	0589898	Pending
AU	4/23/92	1579792	1/12/95	655816	Lapsed
CA	4/23/92	2109221			Pending
GB	4/24/91	910876569			Aband.
JP	4/23/92	50805792			Pending

38. Title: **PRODUCTION OF POLYHYDROXYALKANOATE**
Inventor(s): **Liebergesell, et al.**
Serial No.: **08/178,257**
Filed: **July 15, 1992**
Petition to Revive Granted: February 20, 2001

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	7/15/92	GB9201291	2/4/93	WO9302194	Filed
EP	7/15/92	929145936	5/4/94	0594678	Pending
AU	7/15/92	2312792	9/15/96	671595	Lapsed
CA	7/15/92	2113432			Pending
GB	7/16/91	91152454			Aband.
JP	7/15/92	50266993			Pending

39. Title: **IMPROVED PRODUCTION OF
POLYHYDROXYALKANOATE USING
GRANULE-BINDING PROTEIN WHICH CONTROLS
GRANULE SIZE AND NUMBER**

Inventor(s): **Innis**
U.S. Patent No.: **6,022,729**
Issued: **February 8, 2000**
Serial No.: **08/702,870**
Filed: **July 11, 1995**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
US	7/11/95	08/500735			Pending(?)
GB	7/18/94	94145067			Aband.

40. Title: **PREVENTION OF GELATION OF
POLYHYDROXYALKANOATE SOLUTIONS USING
SHEAR**

Inventor(s):
Serial No.: **60/188,440**
Filed: **March 10, 2000**

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	3/5/01	Not known			Pending

41. Title: **POLYHYDROXYALKANOATE COATINGS**
Inventor(s): **Asrar et al.**
U.S. Patent No.: **6,025,028**

Filed: 7/25/97

<u>Country Code</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Pub. Date</u>	<u>Pub. No.</u>	<u>Status</u>
WO	7/24/98	US9815149	2/4/99	WO9904948	Filed
EP	7/24/98	989359153	5/10/00	0998381	Pending

42. Title: **NUCLEATING AGENTS FOR
POLYHYDROXYALKANOATES AND OTHER
THERMOPLASTIC POLYESTERS AND THEIR
PRODUCTION**

Inventor(s): Asrar et al.
U.S. Patent No.: 5,973,100
Issued: October 26, 1999
Serial No.: 09/122440
Filed: 7/24/98

<u>Country Code</u>	<u>App. Date</u>	<u>Pat. No.</u>	<u>Pub. Date</u>	<u>Status</u>
WO	07/24/98	WO9905208	2/4/99	
EP	07/24/98	0996671	2/4/99	Pending

SCHEDULE B to the Patent Assignment**Patents and Patent Applications
That Have Not Been Maintained**

1. Title: **POLYMER BLENDS AND COMPATIBILIZERS**
Inventor(s): **Ballard, et al.**
U.S. Patent No.: **5,478,892**
Issued: **December 26, 1995**
Status: **Lapsed**
Serial No.: **08/295,626**
Filed: **August 24, 1994**

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	2/26/93	GB9300401	9/2/93	WO9317064	Filed
EP		939042644	12/21/94	0629219	Filed
AU	2/26/93	3572193	1/11/96	666710	Lapsed
BE	2/26/93	939042644	12/21/94	0629219	Lapsed
CA	2/26/93	2128435	9/2/93		Aband.
DE	2/26/93	939042644	12/21/94	0629219	Lapsed
FI	2/26/93	943930			Aband.
FR	2/26/93	939042644	12/21/94	0629219	Lapsed
GB	2/26/93	939042644	12/21/94	0629219	Lapsed
JP	2/26/93	51467093	5/18/95	0P50444995	Aband.
KR	2/26/93	70298194			Aband.
NO	2/26/93	19943157			Aband.
NZ	2/26/93	249218	1/26/96		Lapsed

2. Title: **POLYMER COMPOSITION CONTAINING
POLYHYDROXYALKANOATE AND METAL
COMPOUND**
Inventor: **Hammond**
U.S. Patent No.: **5,646,217**
Issued: **July 8, 1997**
Status: **Lapsed**
Serial No.: **08/433,343**
Filed: **November 4, 1993**

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	11/4/93	GB9302280	5/26/94	WO9411440	Filed
EP	11/4/93	939247052	9/6/95	0669959	Aband.
AU	11/4/93	5426894	12/19/96	674361	Lapsed
CA	11/4/93	2147857	5/26/94		Aband.

JP	11/4/93	51182894	4/16/96	OP54350096	Aband.
NO	11/4/93	951766			Aband.

3. Title: **PROCESS OF POLYESTERS**
 Inventor(s): **Liggat, et al.**
 U.S. Patent No.: **5,789,536**
 Issued: **August 4, 1998**
 Status: **Lapsed**
 Serial Nos.: **08/553,642**
 Filed: **June 1, 1994**

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	6/1/94	GB9401181	12/8/94	WO9428047	Filed
EP	6/1/94	949170740	3/20/96	0701580	Aband.
CA	6/1/94	2163552	12/8/94		Aband.
GB	6/2/93	93114023			Aband.
JP	6/1/94	52585594	10/29/96	OP51029396	Aband.

4. Title: **POLYMER COMPOSITIONS AND PROCESSES PRODUCED FROM HYDROXYALKANOIC ACID**
 Inventor(s): **Greer, et al.**
 U.S. Patent No.: **5,525,658**
 Issued: **June 11, 1996**
 Status: **Lapsed**
 Serial Nos.: **08/374,663**
 Filed: **July 15, 1995**

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	7/15/93	GB9301492	2/3/94	WO9402541	Filed
EP		939160859	5/10/95	0651775	
AU	7/15/93	4578293			Lapsed
BE	7/15/93	939160859	5/10/95	0651775	Lapsed
CA	7/15/93	2137580	2/3/94		Aband.
FI		7/15/93	950285		Aband.
FR	7/15/93	939160859	5/10/95	0651775	Lapsed
GB	7/15/93	939160859	5/10/95	0651775	Lapsed
JP	7/15/93	50425994	10/12/95	OP50926595	Aband.
ZA	7/21/93	935288			Lapsed

5. Title: **POLYESTER COMPOSITION**
 Inventor(s): **Liggat, et al.**
 U.S. Patent No.: **5,693,389**
 Issued: **December 2, 1997**
 Status: **Lapsed**

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	5/20/94	GB9401095	12/8/94	W09428070	Filed
EP	5/20/94	949156400	3/13/96	0700418	Aband.
AU	5/20/94	6727594	11/13/97	683466	Lapsed
CA	5/20/94	2162173	12/8/94		Aband.
FI	5/20/94	955645			Aband.
GB	5/24/93	93107126			Aband.
JP	5/20/94	50035895	11/5/96	OP51049896	Aband.
NO	5/20/94	954748			Aband.

6. Title: **PROCESSING OF POLYESTERS**
 Inventor(s): **Liggat, et al.**
 U.S. Patent No.: **5,874,040**
 Issued: **February 23, 1999**
 Status: **Lapsed**
 Serial Nos.: **08/892,311**
 Filed: **July 14, 1997**

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	6/1/94	GB9401183	12/8/94	WO9428049	Filed
EP	6/1/94	949170765	3/20/96	0701582	Aband.
CA	6/1/94	2163553			Aband.
GB	6/2/93	93114007			Aband.
JP	6/1/94	50042095	2/20/97	OP50144997	Aband.

7. Title: **PROCESS FOR PREPARING FILMS AND COATINGS**
 Inventor(s): **Liddell, et al.**
 U.S. Patent No.: **5,691,174**
 Issued: **November 25, 1997**
 Status: **Lapsed**
 Serial Nos.: **08/530,332**
 Filed: **April 7, 1994**

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	4/7/94	GB9400741	10/27/94	WO9424302	Filed
EP		949120273	1/31/96	0694074	Filed
AU	4/7/94	6434494	1/31/97	676035	Lapsed
BE	4/7/94	949120273	1/31/96	0694074	Lapsed
BR	4/7/94	PI94064520			Aband.
CA	4/7/94	2160564	10/27/94		Aband.
DE	4/7/94	949120273	1/31/96	0694074	Lapsed
FI	4/7/94	954836			Aband.
FR	4/7/94	949120273	1/31/96	0694074	Lapsed

IT	4/7/94	949120273	1/31/96	0694074	Lapsed
JP	4/7/94	52287394	9/24/96	OP50888196	Aband.
MX	4/13/94	942657			Aband.
NO	4/7/94	954088			Aband.
ZA	4/12/94	942515			Lapsed

8. Title: **COPOLYMER PRODUCTION**
 Inventor(s): **Anderson, et al.**
 U.S. Patent No.: **5,264,546**
 Issued: **November 23, 1993**
 Status: **Lapsed**
 Serial Nos.: **07/870,480**
 Filed: **April 17, 1992**

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
EP		903042679	11/7/90	0396289	Lapsed
AT	4/20/90	903042679	11/7/90	0396289	Lapsed
AU	4/27/90	5452390	10/8/92	629632	Lapsed
BE	4/20/90	903042679	11/7/90	0396289	Lapsed
BR	9/2/90	PI90020600			Aband.
CA	5/1/90	2015830			Aband.
CH	4/20/90	903042679	11/7/90	0396289	Lapsed
DE	4/20/90	903042679	11/7/90	0396289	Lapsed
ES	4/20/90	903042679	11/7/90	0396289	Lapsed
FR	4/20/90	903042679	11/7/90	0396289	Aband.
GB	4/20/90	903042679	11/7/90	0396289	Lapsed
IN	4/25/90	404DEL90	5/30/98	0396289	Lapsed
IT	4/20/90	903042679	11/7/90	0396289	Lapsed
JP	5/2/90	11668590	2/28/91	OP4708291	Lapsed
KR	5/1/90	61931990			Aband.
LU	4/20/90	903042679	11/7/90	0396289	Lapsed
MW	4/26/90	MW4090			Lapsed
NL	4/20/90	903042679	11/7/90	0396289	Lapsed
NZ	4/26/90	233,452			Lapsed
SE	4/20/90	903042679	11/7/90	0396289	Lapsed
TRAN	4/27/90	900038			Lapsed
TW	5/15/90	79103931	10/1/91		Lapsed
ZA	4/24/90	903108			Lapsed

9. Title: **COPOLYESTERS AND METHODS OF THEIR PRODUCTION**
 Inventor(s): **Cox, et al.**
 U.S. Patent No.: **5,977,291**
 Issued: **November 2, 1999**
 Status: **Issued**

Filed: September 21, 1995

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	9/21/95	GB9502257	3/28/96	WO9609402	Filed
EP	9/21/95	959321019	7/16/97	0783587	Aband.
CA	9/21/95	2200473			Aband.
FI	9/21/95	971199			Aband.
GB	9/22/95	94190824			Aband.
JP	9/21/95	51070096	6/16/98	KOHYO50601298	Aband.
KR	9/21/95	7018681997			Aband.
MX	9/21/95	972206	12/1/97		Aband.
NO	9/21/95	19971279			Aband.

10. Title: **HV/HB COPOLYMER PRODUCTION**
 Inventor(s): **Cox, et al.**
 U.S. Patent No.: **6,080,562**
 Issued: **June 27, 2000**
 Status: **Issued**
 Serial No.: **07/949,524**
 Filed: **May 24, 1991**

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	10/19/92	EP9100978	12/12/91	WO9118995	Filed
EP	9/13/95	919102236	4/7/93	0535012	Filed
AT	5/24/91	919102236	4/7/93	0535012	Lapsed
AU	5/24/91	7970891	9/15/94	652942	Lapsed
CA	5/24/91	2083695	11/26/91		Pending
DE	5/24/91	919102236	4/7/93	0535012	Issued
GB	5/24/91	919102236	4/7/93	0535012	Issued
IT	5/24/91	919102236	4/7/93	0535012	Issued
JP	5/24/91	50952491			Pending
KR	5/24/91	70296892			Aband.
NL	5/24/91	919102236	4/7/93	0535012	Lapsed

11. Title: **ALIPHATIC POLYESTER COMPOSITION**
 Inventor(s): **Lehrle, et al.**
 U.S. Patent No.: **6,005,066**
 Issued: **December 21, 1999**
 Status: **Lapsed**
 Serial No.: **08/768,030**
 Filed: **June 13, 1995**

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	6/13/95	GB9501375	12/21/95	WO9534599	Filed
EP	6/13/95	950244047	4/7/93	0535012	Aband.

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GB 6/13/94 94117926
 JP 6/13/95 50180096 5/6/98 KOHYO50458398 Aband.
 Aband.

12. Title: **PROCESS OF RECOVERING POLYMERS OF
 HYDROXYALKANOIC ACIDS**

Inventor(s): **George, et al.**
 U.S. Patent No.: 5,952,460
 Issued: September 14, 1999
 Status: Lapsed
 Serial No.: 08/793,019
 Filed: August 15, 1995

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	8/15/95	GB9501925	2/29/96	WO9606178	Filed
EP	8/15/95	959278961	6/4/97	0776371	Aband.
CA	8/15/95	2197782			Aband.
FI	8/15/95				Aband.
GB	8/18/94	94166915			Aband.
JP	8/15/95	50784996	5/6/98	50445998	Aband.
KR	8/15/95	7010621997			Aband.
MX	8/15/95	971249			Aband.
NO	8/15/95	19970738			Aband.

13. Title: **POLYESTER COMPOSITION**

Inventor(s): **Blanshard, et al.**
 U.S. Patent No.: 5,760,170
 Issued: June 2, 1998
 Status: Lapsed
 Serial No.: 08/809,316
 Filed: September 8, 1995

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	9/8/95	GB9502150	3/14/96	WO9607697	Filed
EP	9/8/95	959313016	6/25/97	0779910	Aband.
CA	9/8/95	2199476			Aband.
FI	9/8/95	970984			Aband.
GB	9/9/94	94181740			Aband.
JP	9/8/95	50932896			Aband.
KR	9/8/95	7015671997			Aband.
MX	9/8/95	971818			Aband.
NO	9/8/95	971055			Aband.

14. Title: **STRUCTURE HAVING CONTROLLED WATER
 RESISTANCE**

Issued: October 1, 1996
 Status: Lapsed
 Serial No.: 08/204,263
 Filed: November 11, 1992

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	11/11/92	GB9202078	5/27/93	WO9310308	Filed
EP	11/11/92	929229011	9/7/94	0613510	Filed
BE	11/11/92	929229011	9/7/94	0613510	Lapsed
DE	11/11/92	929229011	9/7/94	0613510	Lapsed
FR	11/11/92	929229011	9/7/94	0613510	Lapsed
GB	11/11/92	929229011	9/7/94	0613510	Lapsed
IT	11/11/92	929229011	9/7/94	0613510	Lapsed
JP	11/11/92	50906593	2/2/95	OP50110895	Aband.

15. Title: **PROCESS FOR THE MICROBIOLOGICAL PRODUCTION OF PHA POLYMERS**

Inventor(s): Naylor, et al.
 U.S. Patent No.: 5,871,980
 Issued: February 16, 1999
 Status: Lapsed
 Serial No.: 08/894,347
 Filed: February 9, 1996

Country Code	App. Date	App. No.	Pub. Date	Pub. No.	Status
WO	2/9/96	GB9600293	8/22/96	WO9625509	Filed
EP	2/9/96	969019322	12/3/97	0809706	Aband.
FI	8/15/97	973365			Aband.
GB	2/17/95	95031746			Aband.
JP	2/9/96	52474296	1/6/99	KOHYO50000899	Aband.